

2010 Arizona Boating Safety Report



ARIZONA
GAME AND FISH
DEPARTMENT



Special thanks to the following agencies for their cooperation in providing accident data, local background information, and watercraft law enforcement statistics for this report:

Apache County Sheriff's Office
 Arizona Game and Fish Department
 Arizona State Parks
 Bullhead City Police Department
 Bureau of Land Management
 California Department of Boating and Waterways
 Cochise County Sheriff's Office
 Coconino County Sheriff's Office
 Gila County Sheriff's Office
 La Paz County Sheriff's Office
 Lake Havasu City Police Department
 Maricopa County Sheriff's Office
 Mohave County Sheriff's Office
 National Park Service
 Navajo County Sheriff's Office
 Nevada Department of Wildlife
 San Bernardino County Sheriff's Department
 United States Fish and Wildlife Service
 United States Coast Guard
 Yuma County Sheriff's Office

The 2010 Arizona Boating Safety Report is a technical report provided by the Arizona Game and Fish Department. The data and statistics were researched, compiled and written by Cindy Wall, Tim Baumgarten, Jim Harken, Ed Huntsman, Kelley Fowke, Ron Christofferson, Madelynn Fenske and Kevin Bergersen.



- | | | |
|--------------------------|--------------------|--------------------------|
| 1. Alamo Lake | 8. Lake Havasu | 14. Lake Powell |
| 2. Apache Lake | 9. Lake Mary | 15. Roosevelt Lake |
| 3. Bartlett Lake | 10. Lake Mead | 16. Saguaro Lake |
| 4. Canyon Lake | 11. Lake Mohave | 17. San Carlos Reservoir |
| 5. Upper Colorado River | 12. Patagonia Lake | |
| 6. Middle Colorado River | 13. Lake Pleasant | |
| 7. Lower Colorado River | | |

2010 Arizona Boating Safety Report

FROM THE DESK OF THE DIRECTOR

Dear Arizona Boating Enthusiast,

Arizona's unique and diverse waterways, though few in number, see some of the highest density of boat use in the country. Whether it's fishing on Big Lake in the White Mountains, water skiing on Bartlett Lake, riding a personal watercraft on Lake Powell, or discovering the dock renovations and improvements at Patagonia Lake, you are partaking in a fantastic outdoor experience while becoming part of the Arizona boating story. The need for boating safety has never been greater than it is right now. Recently, fatal accident numbers as well as boating accidents involving paddlecraft have been on the rise, so the need for increased safety messages is critical across all watercraft users.

The Arizona Game and Fish Department continues to lead a collaborative effort to make boating in Arizona a more enjoyable and safe form of outdoor recreation. Our Department believes that by developing strong partnerships with various agencies and non-government organizations, the recreational boating safety users across Arizona can expect superior on-the-water law enforcement efforts and boating safety education programs.

Boat accident data contained in this report is utilized by twenty-seven law enforcement and boating safety organizations to help make data-driven decisions geared toward reducing boating accidents, injuries and fatalities. In 2010, Arizona ranked thirteenth in the country in the number of boating accidents and thirteenth in the number of boating injuries. Causes for those accidents and injuries included operator inattention and inexperience as well as passenger and skier behavior. Ensuring safe boating requires constant collaborative efforts to assure that public safety is being upheld on our waterways while fostering a culture of safety by the state's recreational boaters. Working together, the department and our partners will continue to educate the public about making good decisions when out on the water.

This report is available on the department's website at www.azgfd.gov/boating. For more information about this or other recreational boat accident statistics, please contact Kevin Bergersen at (623) 236-7383 or kbergersen@azgfd.gov.

Sincerely,



Larry D. Voyles, Director



1

Director

Larry D. Voyles

Phone: (602) 942-3000

Arizona Game and Fish Commission

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Chair, Roll

Norman W. Freeman

Chino Valley

Jack F. Husted

Springerville

J.W. Harris

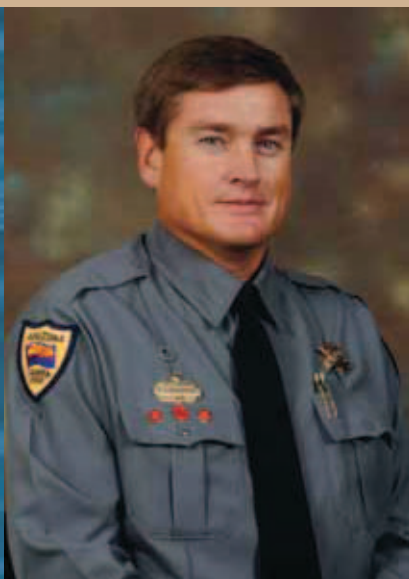
Tucson

Robert E. Mansell

Winslow

2010 Arizona Boating Safety Report

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2

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Boat Safe, Boat Smart, Boat Sober.

Take a boating education class.



www.azgfd.gov/boating

The Arizona Game and Fish Department prohibits discrimination on the basis of race, color, sex, national origin, age, or disability in its programs and activities. If anyone believes that they have been discriminated against in any of the AGFD's programs or activities, including employment practices, they may file a complaint with the Director's Office, 5000 W. Carefree Highway, Phoenix, Arizona 85086, (602) 942-3000, or with the U.S. Fish and Wildlife Service, 4040 N. Fairfax Drive, Ste. 130, Arlington, VA 22203. Persons with a disability may request a reasonable accommodation or this document in an alternative format by contacting the Deputy Director as previously mentioned.

Administrative Authority

The Arizona Game and Fish Commission has been involved in boating safety and law enforcement since passage of the Federal Boat Safety Act of 1971. The Commission derives their authority from state law contained within Arizona Revised Statutes (ARS) Title V.

ARS § 5-311 outlines the powers and duties of the Arizona Game and Fish Commission to make the rules and regulations required to carry out, in the most effective manner, all the provisions of boating safety for the state of Arizona. By statute, the

Arizona Game and Fish Commission's statewide boating safety program and registration mandates are extremely broad. The Arizona Game and Fish Department (Department) is responsible for providing a safe watercraft recreation environment so that Arizona's lakes and rivers will be used, enjoyed and appreciated by present and future generations.

Watercraft Law Enforcement

The Department provides approximately 25 percent of all boating law enforcement effort statewide. The primary law

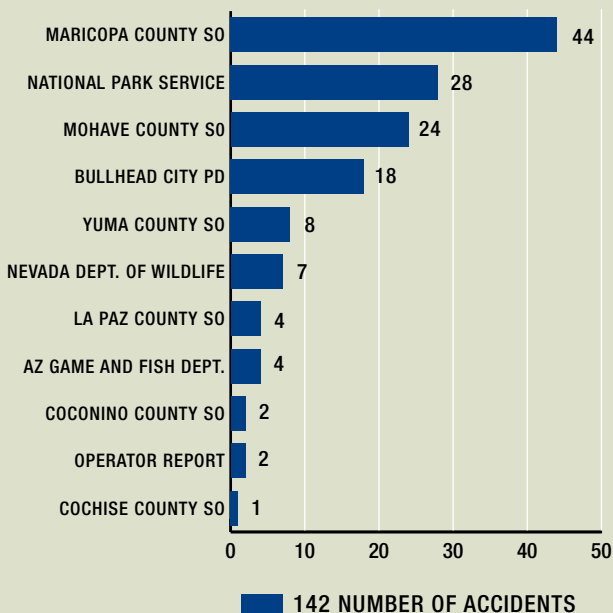
enforcement authorities and emergency response capabilities resides with local agencies, which might be a state, county, municipality, tribal, national park, or land management agency depending on the waterway's location.

The Department is the administrative agency responsible for watercraft accident reporting in the state of Arizona. If the accident involves an injury or fatality, a written report must be submitted by either the jurisdictional agency or the boat operator, within 48 hours. All other accidents must be reported within

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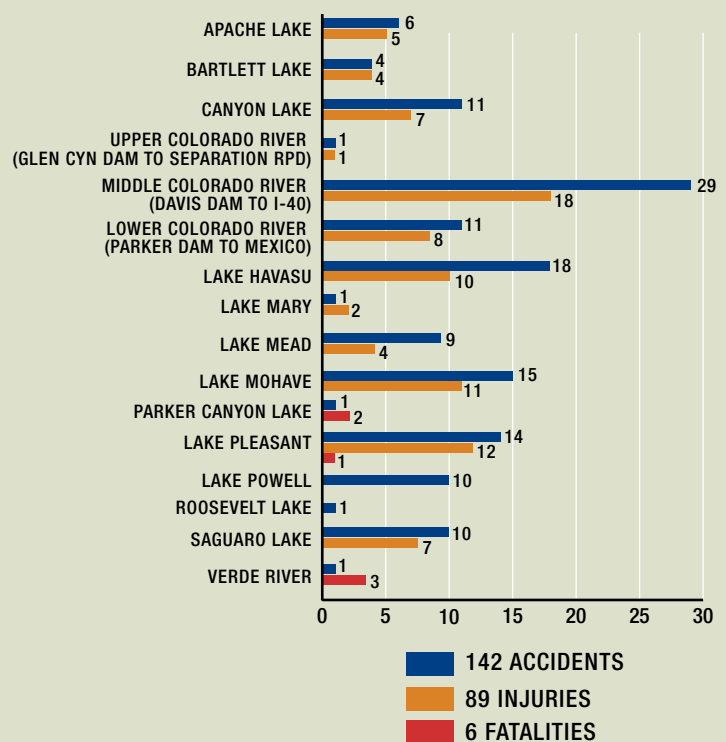
Agencies Reporting Accidents

142 Total Accidents



Bodies of Water

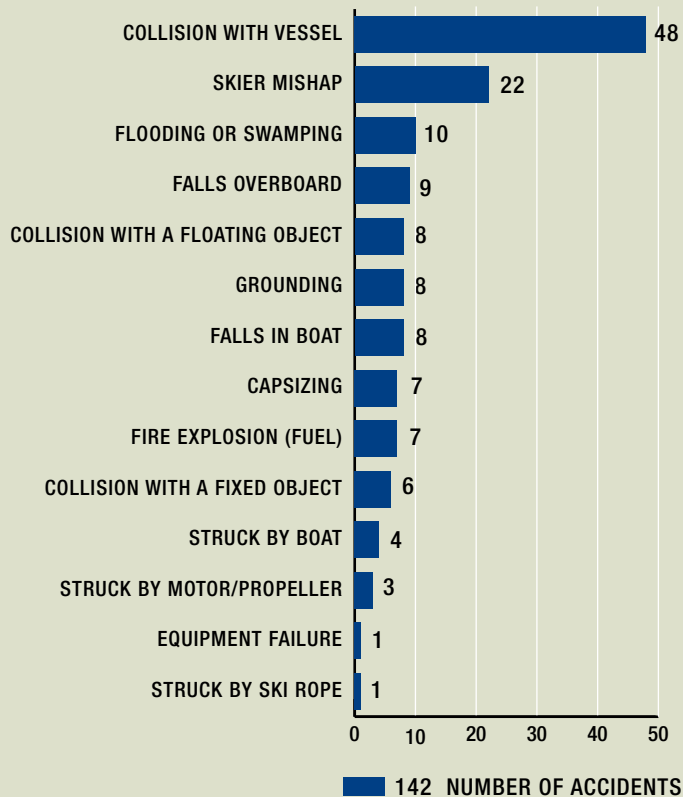
142 Total Accidents / 89 Injuries / 6 Fatalities





Primary Accident Types

142 Total Accidents



Primary Accident Cause

142 Total Accidents



five days. These reports are then compiled, tabulated and forwarded, per a Memorandum of Agreement, to the U.S. Coast Guard (USCG) for use in national statistics.

In 2010, 10 law enforcement agencies, along with boat operators, reported 142 watercraft accidents totaling \$492,817 in damages. Information from these accident reports assist Arizona law enforcement agencies in identifying safety needs, developing new regulations, designing new enforcement techniques, identifying problems in manufacturing, and directing boating safety programs and law enforcement resources to particular areas of concern.

Operating Under the Influence

Since 1998, statistical analysis of boating accidents indicates that 43 percent of all Arizona fatal boat accidents (48 out of 111) involve alcohol. In an effort to reduce alcohol-related accident numbers, federal, state, county and local law enforcement agencies have developed partnerships to conduct cooperative operating under the influence (OUI) patrols, including participating in Operation Dry Water. Operation Dry Water is a one-day national effort on June 26th to emphasize boating under the influence on our nation's waterways. These multi-agency special projects include on-the-water

sobriety checkpoints and targeted law enforcement saturation patrols from agencies in Arizona, Nevada, Utah and California, as well as federal officers from the National Park Service, the Bureau of Land Management and the U.S. Fish and Wildlife Service.

Statewide, watercraft law enforcement officers were very successful in detecting and arresting impaired boat operators. In 2010, law enforcement arrested 297 individuals for operating under the influence (Figure 1). Eight interagency saturation patrols and sobriety checkpoint operations were employed during the summer season in 2010, which resulted in twenty-three of the 297 OUI statewide arrests. The eight interagency projects

(continued on page 6)



contacted 1,521 watercraft (with 6,291 persons on board), and law enforcement officers issued 154 citations for boating safety violations. The boating public has continued to be highly supportive of OUI interdiction efforts.

Many boat operators appear to be heeding the message of sober boating on the state's waterways. Watercraft law enforcement officers statewide have reported observing an increase of designated sober operators during routine contacts. To encourage the theme of designating operators, agencies along the

Colorado River have partnered with local restaurants and the Lake Havasu Marine Association in the Lake Havasu City area to purchase "Designated Operator" wristbands and promote sober operation by offering complimentary non-alcoholic drinks to those persons wearing designated operator wristbands at participating establishments. While encountering boat operators who practice safe and sober boating is highly encouraging, drinking while boating continues to be a critical problem and a high-priority objective for watercraft enforcement officers during patrols.

Watercraft Accidents

While the boat use trend has gradually increased since 1991 (Figure 2), an analysis of boat accident data reveals a downward trend in total accidents, injuries and fatalities over that same time frame. This is reflected in the 2010 accident statistics where Arizona had 142 boating accidents involving 197 vessels, and 89 individuals reported injuries. An analysis of these numbers reveals there were 41 fewer vessels involved in accidents than in the prior year and the total number of accidents decreased by 37 (Figure 3).

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2010 Statewide OUI Arrest Totals by Agency

Agency	Arrests
Maricopa County Sheriff's Office	111
Lake Havasu City Police Department	55
Arizona Game and Fish Department	51
Mohave County Sheriff's Office	23
U.S. Fish and Wildlife Service	18
Bullhead City Police Department	12
Bureau of Land Management	10
La Paz County Sheriff's Office	8
Yuma County Sheriff's Office	6
National Park Service	2
Coconino County Sheriff's Office	1

297 Total

FIGURE 1

All Agencies Statewide OUI Arrests Trend Data

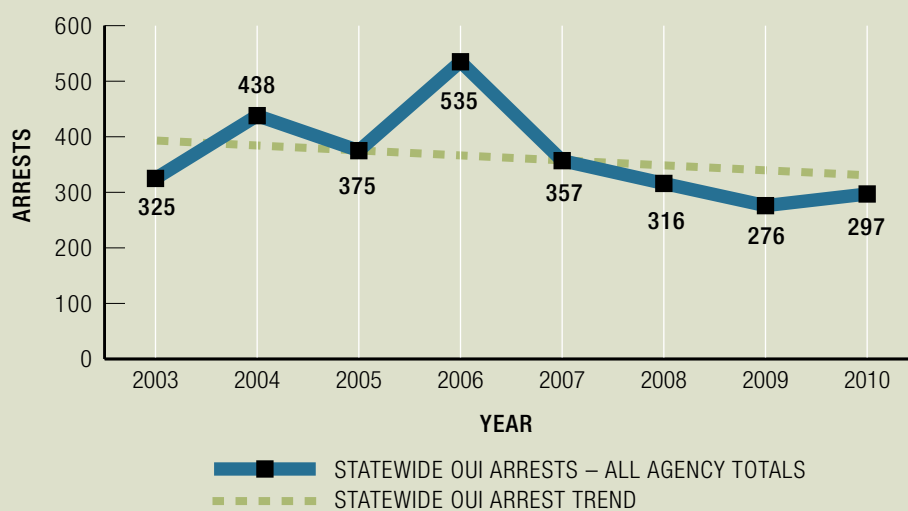
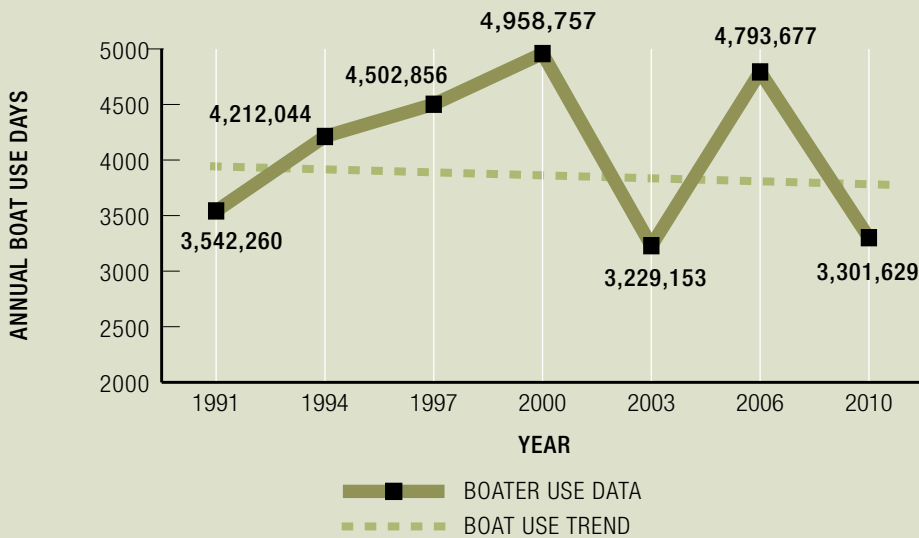
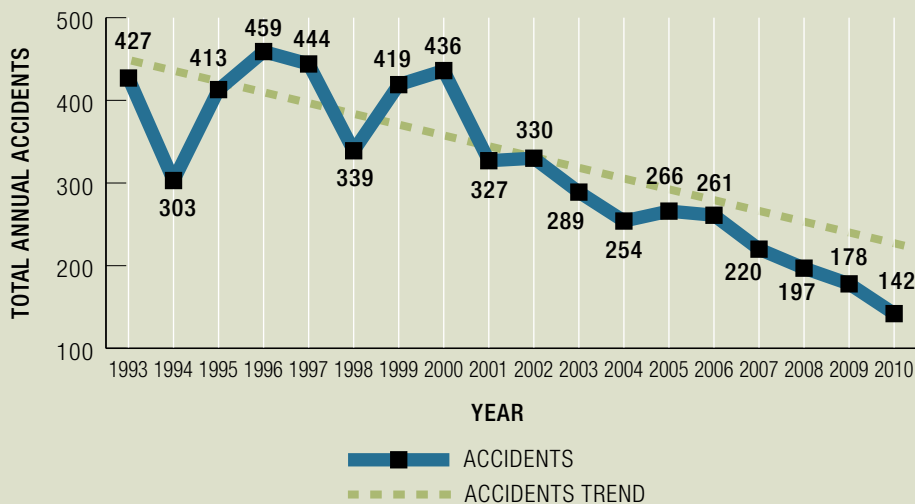
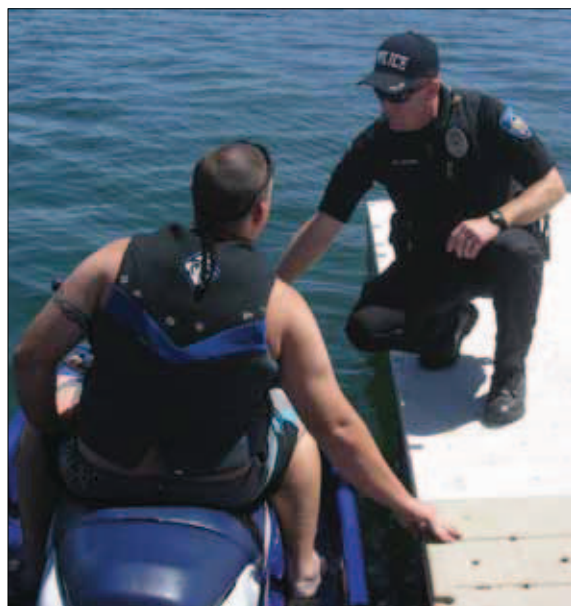


FIGURE 2**Annual Boat Use Days Trend****FIGURE 3****Annual Accident Trend Data****FIGURE 4****Annual Injury Trend Data**

The number of injuries decreased by thirty (Figure 4). Following a year with the lowest recorded number of fatalities in 2009 (two), 2010 was somewhat disappointing with six fatalities, equaling the number of recreational boating deaths that occurred in 2008 (Figure 5). Seventeen of the boating accidents that resulted in injuries and all of the 2010 fatalities were determined to be alcohol-related.

Boating continues to be an increasingly popular form of recreation in Arizona. The number of registered watercraft in Arizona has grown from 105,000 in 1986 to 135,326 in 2010 (Figure 6). This trend is supported by data from the Watercraft Gas Tax Survey conducted triennially. The Gas Tax Survey completed in late 2009 reported approximately 3,301,629 total boat use days for Arizona. This indicates a 31 percent decrease from the 4,793,677 boater use days calculated from the 2006 survey data (see Figure 2). Arizona boaters comprised 55 percent of those days, while California boaters made up 35 percent. Nevada boaters represented most of the remaining percentage. Promoting the safety and education of all recreational boaters in Arizona, regardless of where they reside, is the main focus of the Arizona Game and Fish Department's watercraft safety program.

(continued on page 10)



CATEGORY	2009	2010	INCREASE/DECREASE
Total # of Accidents	179	142	Decrease of 37 Accidents
Total # of Vessels	238	197	Decrease of 41 Vessels
Total # of Injuries	119	89	Decrease of 30 Injuries
Total # of Fatalities	2	6	Increase of 4 Fatalities
Total Estimated Property Damage	\$501,046	\$492,817	Decrease of \$8,229





FIGURE 5
Fatality Trend

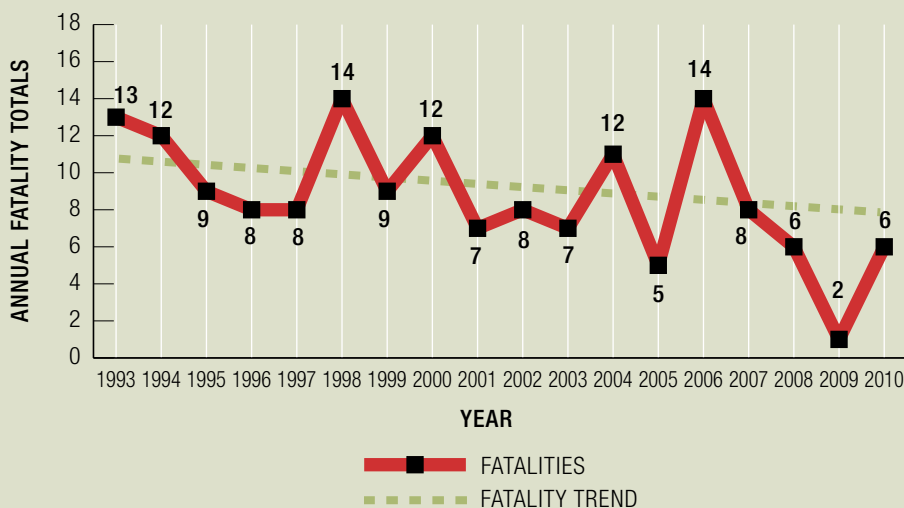
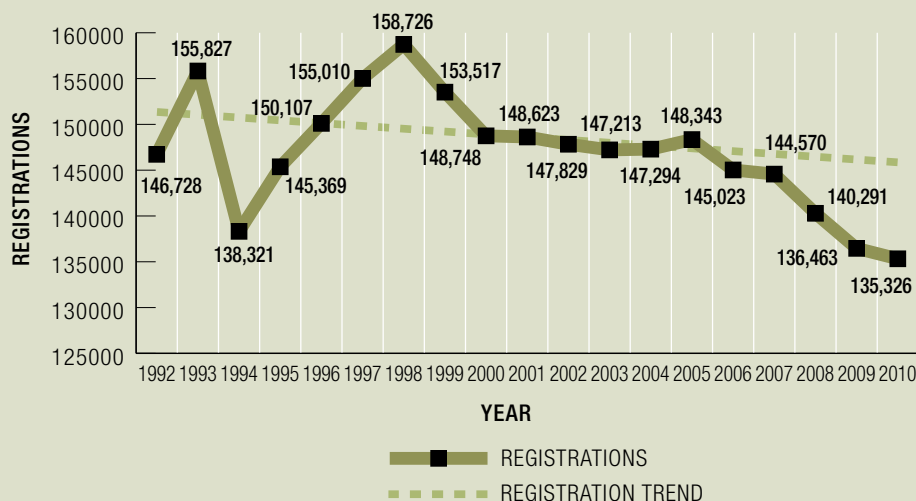


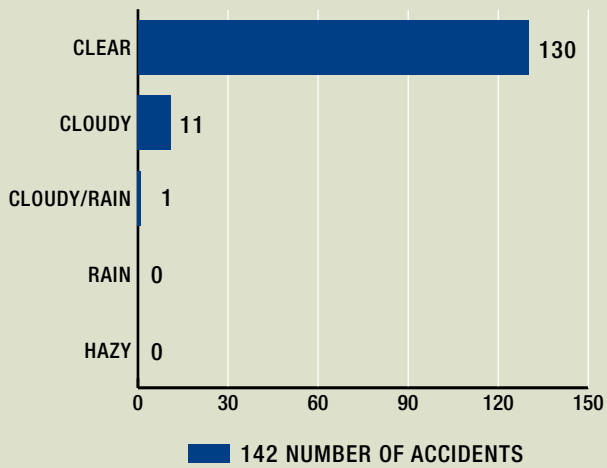
FIGURE 6
Watercraft Registrations



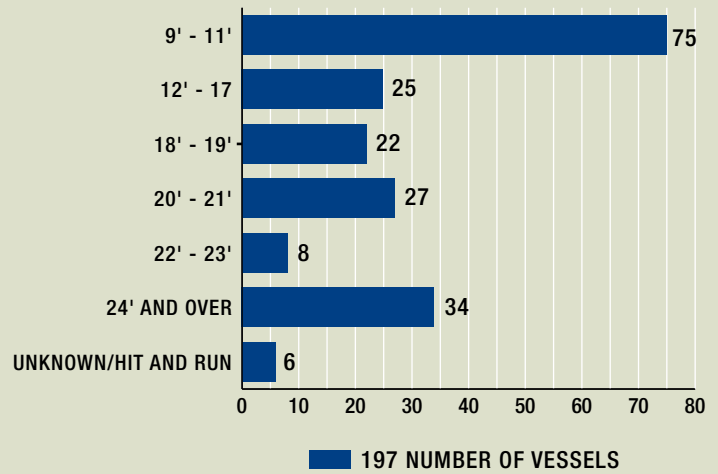
In analyzing watercraft accident information, there are five main areas of interest: type and cause of the accident, operator information, boats and equipment involved, environmental conditions at the time of the accident, and time and location of the accident. The three leading causes of accidents for the last 17 years has been operator inattention, operator inexperience and passenger/skier behavior. In 2010, passenger/skier behavior slightly edged operator inattention as the leading cause of boating accidents. Arizona and California residents comprised seventy-six percent of all operators involved in boat accidents and were equally represented segments of that total. The types of watercraft most often involved in these accidents were open motorboats (43 percent) and personal watercraft (40 percent).

The average boat accident occurred during the day when weather conditions were usually clear, with good visibility and the waters calm or choppy. The most dangerous month for recreational boating in 2010 was May. July was second, with June third. The months of May, June, July, August and September traditionally have high numbers of boating accidents because they have peak boater day use along with the summer's busiest boating holidays: Memorial Day, Independence Day and Labor Day. In 2010 42 percent of all accidents occurred between noon and 4 p.m., and weekends had the most accidents (35 percent on Saturday and 27 percent on Sunday).

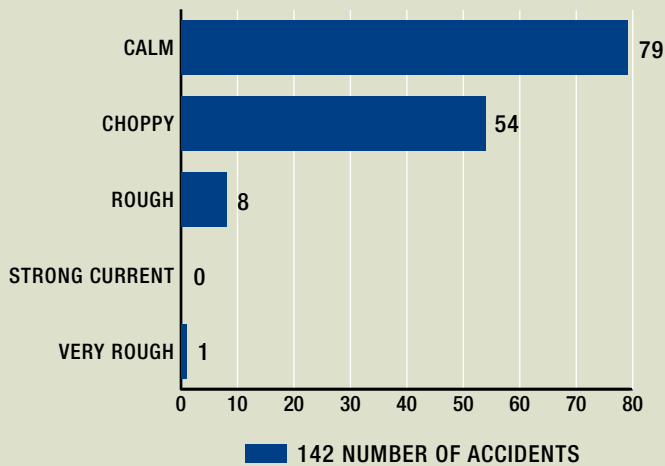
Weather Conditions



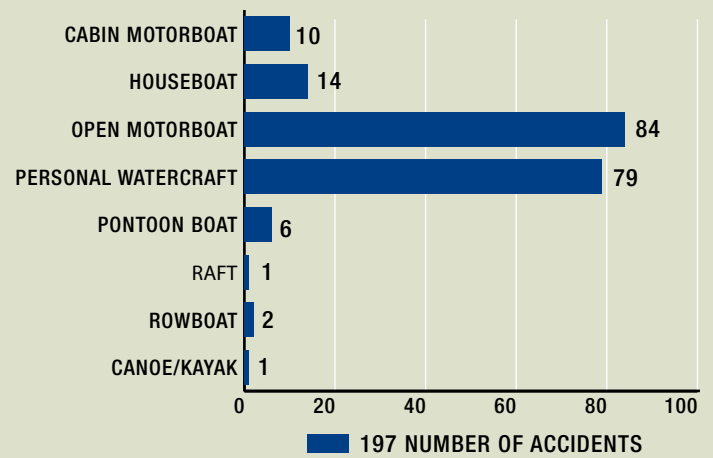
Length of Watercraft



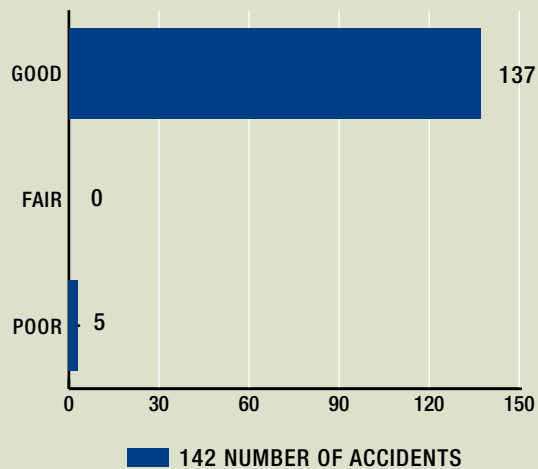
Water Conditions



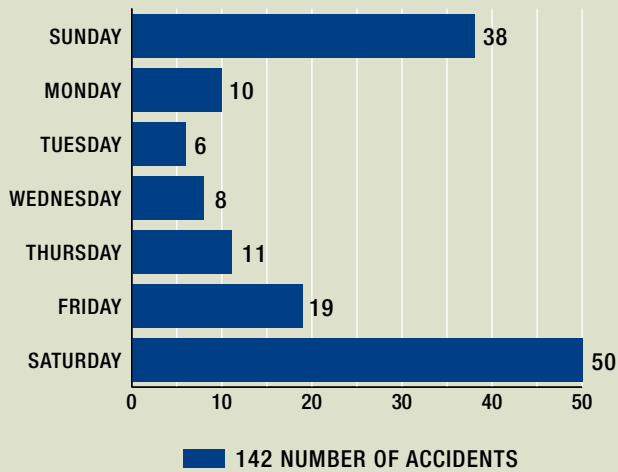
Types of Watercraft in Accidents



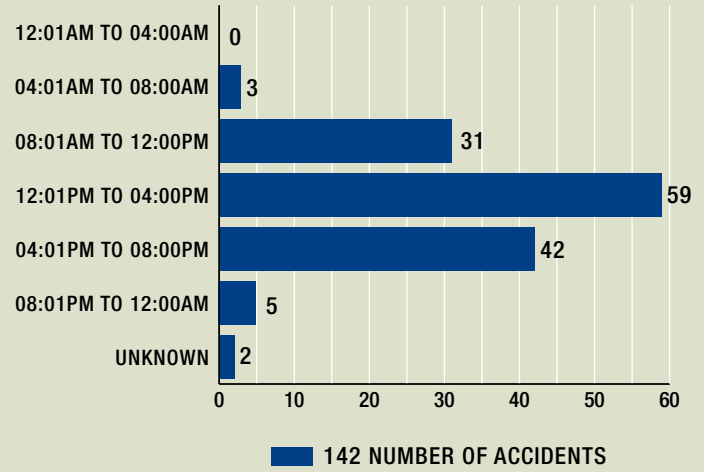
Visibility Conditions



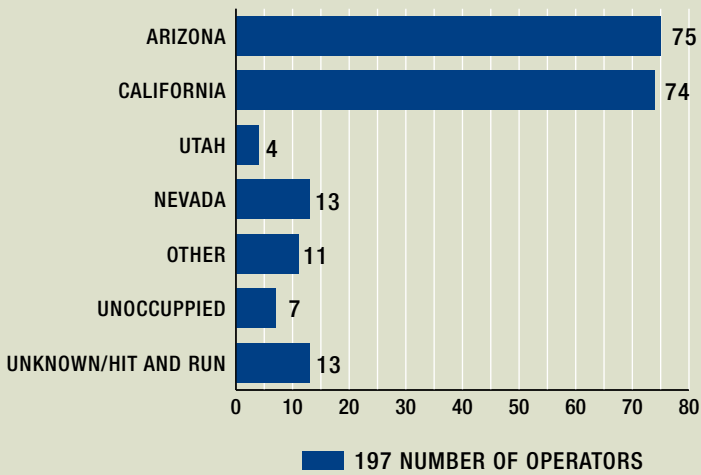
Accidents by Day of Week



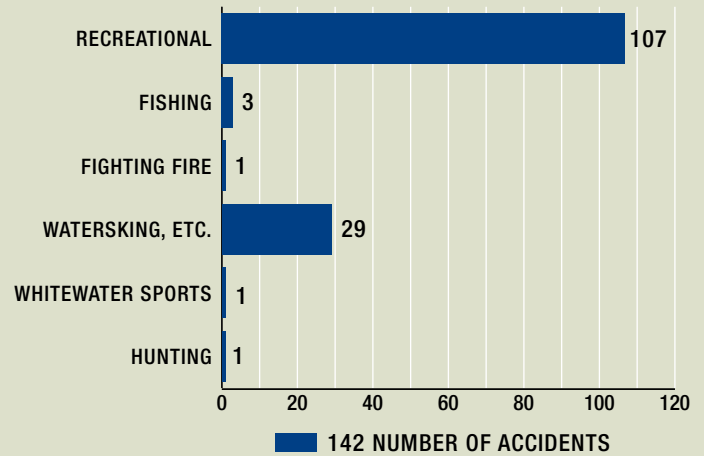
Accidents by Time of Day



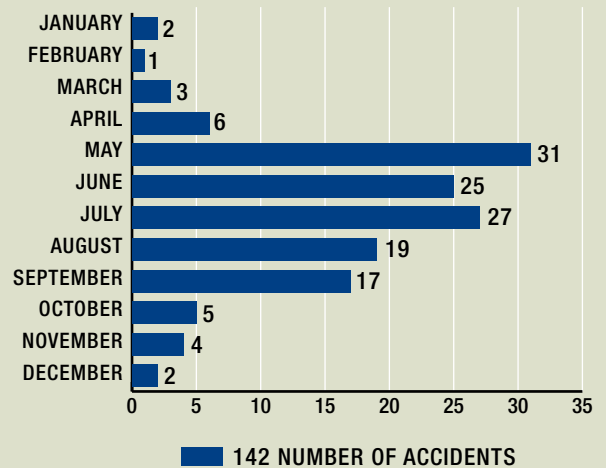
Residency of Watercraft Operator



Activity at Time of Accident



Accidents by Month



Boating Safety Education

Education is considered to be one of the most effective ways to reduce the number of boating accidents. One of only eight non-mandatory boating safety education states / territories, the Department continues to provide its (approximately) eight-hour core basic boating safety education course developed to provide new recreational power boaters the fundamental information they need to start boating safely. The course also serves as a good review for experienced boaters. In addition, in an effort to respond to emerging paddlesports injuries and deaths, the Department will be introducing *Paddlesports Arizona*, a classroom and hands-on boating education course specifically for kayak and canoe enthusiasts. Arizona will be one of the first states in the country to offer this specialized curriculum for paddling in 2011.

Many insurance companies offer discounts to those individuals who successfully complete a boating safety course as a way to encourage boater education and reduce accidents.

Currently, the Department's Education Branch annually reviews course content to meet nationally recognized education standards. Approximately 25 active volunteer boating education instructors from across the state provide classroom instruction. In 2010 the Department offered 36 classroom courses certifying 489 students. Approximately 515 students

completed the Department's online Internet boating education course. 137 students completed a boating safety education classroom course offered by the Coast Guard Auxiliary, Power Squadron, or other approved Internet course. The total number of students successfully completing a NASBLA approved boating safety education course for 2010 was a record 1141. This was accomplished by expanding the program into the public school system, and by partnering with Northern Arizona University's Outdoors Recreation Department.

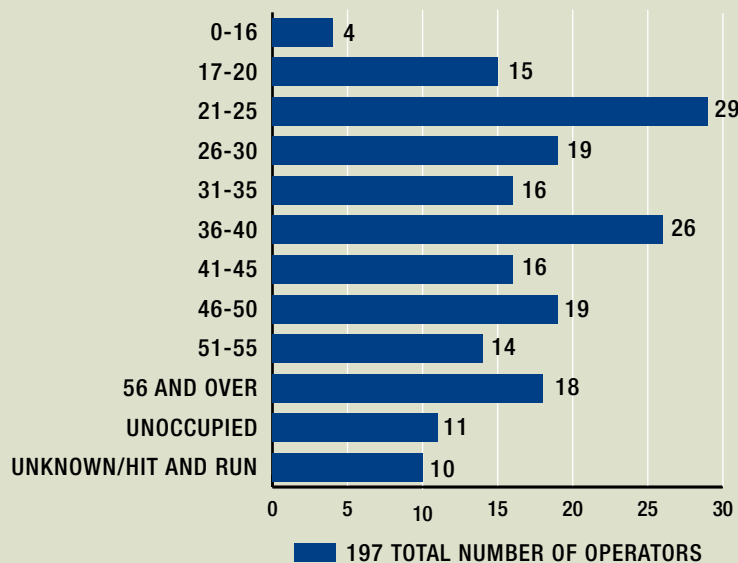
In the summer of 2011, the Department will work to upgrade the qualifications of its boating safety education instructors in an effort to increase and enhance their classroom presentation skills. Further, all Department paddlesports instructors will be qualified as an active L1 (or higher) American Canoe Association Instructor.

The Department continues to work with the judicial system throughout the state to include its boating safety education program as part of alternative sentencing for violators of boating rules and regulations. Judges are encouraged to use the program in lieu of, or in addition to a monetary fine to help increase a boat operator's knowledge of boating safety and operation information and regulations. So far, judges and boating violators have indicated the program

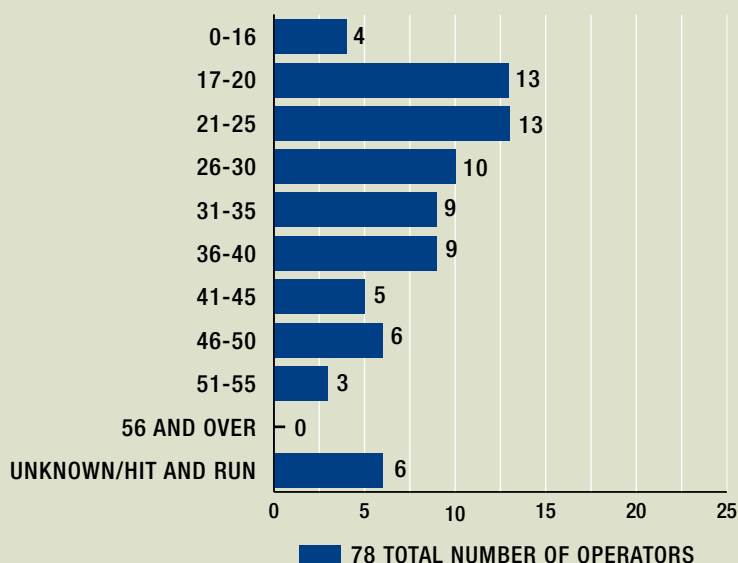
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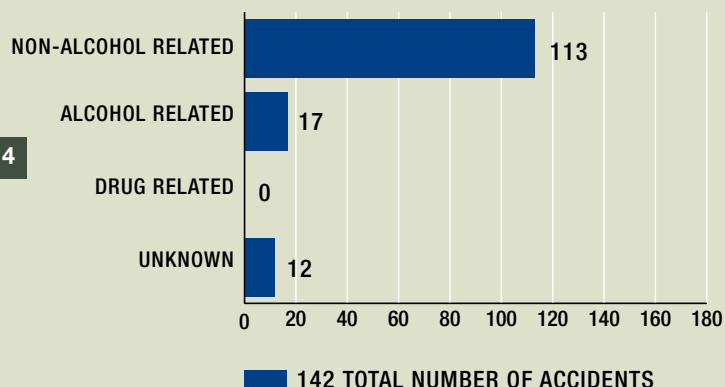
Age of Watercraft Operators



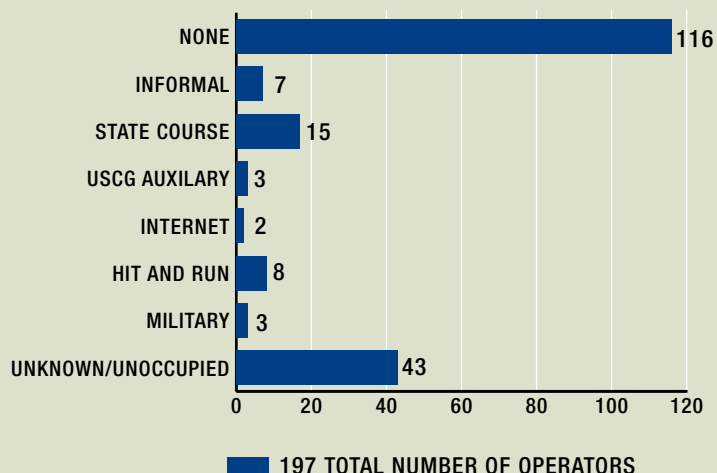
Age of PWC Operators Involved in Accidents



Total Number of Alcohol-Related Accidents

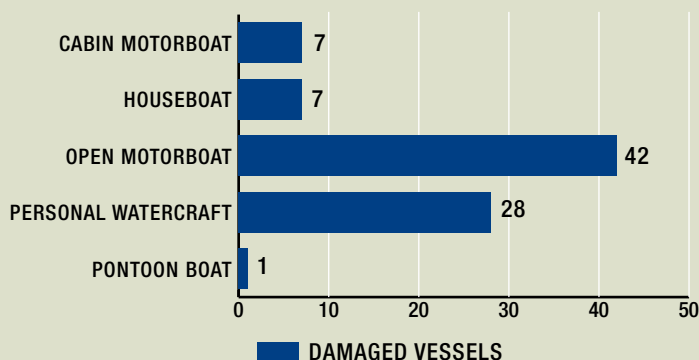


Operator's Boating Education



Property Damage Over \$500

Types of Watercraft





has proven beneficial to increasing awareness of boating safety issues and knowledge on the part of the operator.

Boating Accident Statistics

An area of priority to both recreational boaters and law enforcement agencies is the increasing use of personal watercraft (PWC) and associated accident rates on Arizona waterways. In 1990, only 8,168 PWCs were registered in Arizona, compared to more than 25,981 in 2010. While PWCs comprise approximately 19 percent of all Arizona watercraft registrations, they account for 40 percent of all accidents and 44 percent of all injury accidents.

Many of these accidents can be attributed to numerous first-time operators that are renting or have recently purchased a PWC. A PWC is controlled by water-jet thrust and averages more time on the water than a traditional watercraft. In addition, there is no protection for operator and passengers during a collision.

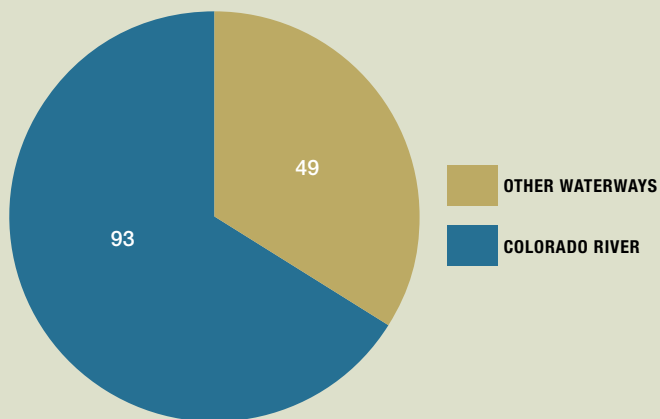
A significant number of boating accidents continue to occur on the Arizona border on the Colorado River. According to 2010 statistics, sixty-six percent of all reported watercraft accidents in Arizona occurred on the Colorado River. This stretch of the river includes Lake Powell, Lake



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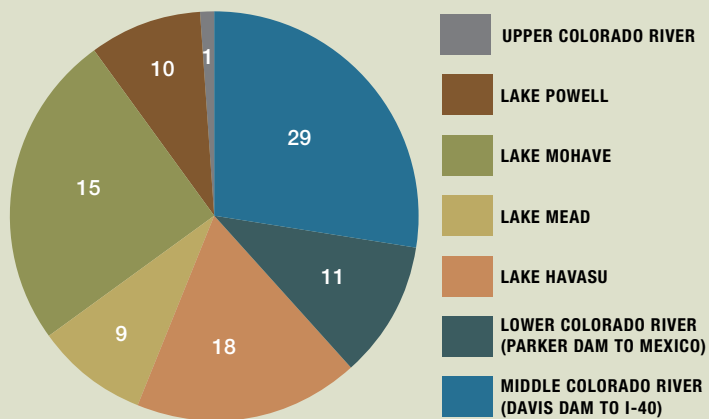
Colorado River System Compared to All Other Arizona Waters

142 Total Accidents



Colorado River System

93 Accidents Reported in Arizona



Mead, Lake Mohave, Lake Havasu and several other open areas of the river. The significant boater use densities along the Colorado River system from Lake Powell (north) to Yuma (south) are a major area of concern to the Arizona Game and Fish Department and other law enforcement agencies.

An increase in law enforcement activity on both sides of the river, particularly OUI enforcement, and a focus on boating education have been shown to help reduce the number of boating accidents along this high-use area.

This information was compiled from boating accident reports submitted to the Arizona Game and Fish Department by watercraft enforcement agencies and persons involved in watercraft accidents throughout Arizona.

Combined 2010 Colorado River statistics from Arizona, California and Nevada:

197 Accidents, 121 Injuries and 4 Fatalities.

National Association of State Boating Law Administrators

ARIZONA'S 2011 BOATING OFFICER OF THE YEAR

Deputy Andy Bahn is a ten-year veteran of the Maricopa County Sheriff's Office (MCSO) assigned for the last four years to the Lake Pleasant Squad within MCSO's Lake Patrol Division. He rises above the norm when it comes to working lake patrol.

Deputy Bahn is an experienced Patrol Deputy, an EMT, and a Certified SCUBA Diver for the Sheriff's Office Dive Team. He is also a certified Phlebotomist and routinely assists other Deputies on the Squad by performing blood draws for the prosecution of OUIs and DUIs.

In 2010, Deputy Bahn led the Sheriff's Office in making 31 Operating Under the Influence (OUI/BUI) arrests. This was almost 40 percent of the total OUI arrests made at Lake Pleasant. Deputy Bahn spent in excess of 350 hours in 2010 devoted to on-water boating

enforcement and issued 290 water-related citations and 117 boating warnings. He was also involved in the investigation of three (3) boating accidents.

Lake Pleasant is the second-largest lake in the state and is arguably the busiest body of water within central Arizona. It has the distinction of being on the top 15 list of dangerous waterways in the United States for the last several years. The number of alcohol-related boating accidents is down at Lake Pleasant, and is due in no small part to Deputy Bahn and his enforcement efforts. In recognition of this fact, Deputy Bahn received the Mothers Against Drunk Driving MCSO OUI Officer of the Year award at the *Bring it Back Old School – 30 Years of Saving Lives* DUI Enforcement Awards Banquet in early 2011.



Andy Bahn

Arizona Boating Officers of the Year Previous Recipients:

- 2010 Sergeant Doug Schuster**
Mohave County Sheriff's Office
- 2009 Curtis Herbert**
Arizona Game and Fish Department
- 2008 Sergeant Doug Schuster**
Mohave County Sheriff's Office
- 2007 Sergeant Wayne Lupinski**
Maricopa County Sheriff's Office
- 2006 Jared Kayer**
Mohave County Sheriff's Office
- 2005 Tim Baumgarten**
Arizona Game and Fish Department
- 2004 Jerry Burns**
La Paz County Sheriff's Office
- 2003 Deanna Pfleger**
Arizona Game and Fish Department
- 2002 No officer named**
- 2001 Gerald Duvall**
Bullhead City Police Department
- 2000 Steve Andrews**
Arizona Game and Fish Department



RESOURCES

Arizona Game and Fish Department

5000 W. Carefree Highway
Phoenix, Arizona 85086
(602) 942-3000
www.azgfd.gov/boating

USCG

Boating Safety Division

www.uscgboating.org

National Safe Boating Council

www.safeboatingcouncil.org

National Association of State Boating Law Administrators

www.nasbla.org

Arizona Boating Education Classes

(800) 824-2456

or

(623) 236-7219

www.azgfd.gov/education

American Canoe Association

www.americancanoe.org

Arizona Online Watercraft Registration

www.azgfd.gov/boating

Tri-state Boating Safety

www.boatcoloradoriver.com

National Water Safety Congress

www.watersafetycongress.org



www.safeboatingcampaign.com

Boat Safe, Boat Smart, Boat Sober

